

REMARKS

The rejection is respectfully traversed because the proposed combination of Altschul (United States Patent No. 5,845,218) in view of Spitaletta et al. (United States Patent No. 6,112,077) does not teach or suggest a mobile phone featuring a one-piece moulded cover having an assembly including substantially all of the mobile phone's circuitry embedded therein, as recited in claim 1. As best shown in Figures 2 and 4, a polymer material or body 19, such as a urethane, closely encloses the mobile phone's circuitry as if in a matrix. In other words, the whole thrust of the invention is to embed the mobile phone's circuitry assembly into the one-piece moulded cover so that the mobile phone's circuitry assembly and cover together form an integral body.

One important advantage of the claimed invention is that the one-piece moulded cover is a monocoque, i.e. a type of construction in which the mobile phone's body is integral with the mobile phone's chassis. In other words, the one-piece moulded monocoque cover has a unique kind of construction in which the outer skin of the mobile phone carries all or a major part of the stresses on the mobile phone, when dropped, mishandled or the like, as described in the patent application, page 1, lines 26-26.

Another important advantage of the claimed invention is that the lack of seams between cover parts in the mobile phone reduces

or removes the possibility of the ingress of water when compared to conventional mobile phone designs, as described in the patent application, page 1, lines 30-32.

In effect, the claimed monocoque mobile phone design provides a more durable watertight mobile phone design.

In contrast to the claimed invention, Altschul discloses a disposable wireless telephone 10 having a two piece case with front and back case members 14, 16 joined together along abutting edges 18, and having a matrix 49 placed in the case 12 so that the components located within the case 12 are embedded within the matrix 49, as described on column 2, lines 38-68, and as best shown in Figure 4. The case 12 is closed permanently by welding or bonding the abutting edges 18. It is respectfully submitted that Altschul clearly does not teach or suggest to embed the mobile phone's circuitry assembly into the one-piece moulded cover. Clearly, Altschul discloses using a separate case 12 together with a separate matrix 49 for embedding the mobile phone's electronics, which do not form an integral body.

It is respectfully submitted that Spitaletta et al. does not make up for the deficiency in teaching of Altschul. For example, Spitaletta et al. discloses a nonreusable cellular phone 10 having a molded housing 20 with a hinged battery cover 52 as shown in Figures 1A, 1B. (Clearly, Spitaletta et al.'s molded housing 20 is a two-piece element.) The molded housing 20

contains the electronic components shown in Figures 2, 2A, 2B, although it is not shown or described, thus unclear to the undersigned attorney, how the electronic components are physically installed in the molded housing 20. In spite of this, it is respectfully submitted that, similar to Altschul, Spitaletta et al. also does not teach or suggest to embed the mobile phone's circuitry assembly into the one-piece moulded cover so as to form an integral body.

It is respectfully submitted that, since neither cited references teaches or suggests the whole thrust of the claimed invention, i.e. to embed the mobile phone's circuitry assembly into the one-piece moulded cover, the proposed combination does not result in the claimed invention.

Moreover, in order to get from Altschul's disposable wireless telephone design to the claimed mobile phone at least two modifications of Altschul's disposable wireless telephone design appear to be necessary. First, Altschul's two-piece case 12 must be modified into a one-piece casing. Second, Altschul's separate case 12 and separate matrix 49 must be modified so as to be formed as one piece to function as a one-piece cover that also embeds the mobile phone's circuitry assembly. However, even if for argument sake one of ordinary skill in the art were motivated to look towards the teaching of Spitaletta et al. to try to modify Altschul's phone design in such a manner, one would not

find any such suggestion to make such modifications. For example, it is respectfully submitted that nothing in Spitaletta et al. suggest how Altschul's separate case 12 and matrix 49 could be modified so as to be formed a one-piece cover that also embeds the mobile phone's circuitry assembly. Clearly, the instant patent application is the only document on the record that shows and described in Figures 3-4 how to embed the mobile phone's circuitry assembly into the one-piece moulded cover.

Finally, the reasoning on page 3, lines 10-13 states that: "It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the one piece molded cover design of Spitaletta et al. for the cover of Altschul, for the purpose of reducing manufacturing costs and less time for assembly." However, it is respectfully submitted that for the reasons discussed above this combination does not result in the claimed invention since Altschul's cover and matrix must also be formed as one piece, which is not suggested by Spitaletta et al. Moreover, it is respectfully submitted that nothing on the record suggests that an alleged mobile phone that is the by-product of the proposed combination would result in "reducing manufacturing costs and less time for assembly." For example, the instant patent application shows and described in relation to Figures 3-4 a method for manufacturing a mobile phone in which the mobile phone's circuitry assembly is embedded into

the one-piece moulded cover, but nowhere is there a discussion of the cost and assembly time. Instead, the instant patent application describes that the monocoque design and watertightness are important advantages.

Independent claim 7 is amended to contain all the limitation of claim 1 and is also deemed patentable for the reasons discussed above.


Independent claim 30 contains all the limitation of claim 1 and is also deemed patentable for the reasons discussed above.

Claims 2-7 depend from claim 1, claim 12 depends from claim 10, and claims 31-43 depend from claim 30, contain all the limitation respectively therein, and are deemed patentable over the proposed combination for all the reasons discussed above.

Reconsideration and allowance of all the claims are respectfully requested.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the specification:

The first and second subsidiary printed circuit boards 7, [8] 11 are enclosed by a generally box-shaped frame 15 which is open at the back and glued to the main printed circuit board 2. The four side walls, the upper part of the front wall and a small portion along the bottom of the front wall of the frame 15 are moulded in one piece from a transparent, stiff polymer such as polycarbonate or an acrylate polymer. The region between the upper part 15a of the front wall and the small portion along the bottom 15b of the front wall is filled with an elastomeric moulding 16. The elastomeric moulding 16 is shaped to provide the buttons for the membrane keypad.

In the claims:

10. (Twice Amended) A portable electronic apparatus comprising a one-piece cover with an aperture, an assembly including substantially all of the mobile phone's circuitry, and a display, wherein the cover [has an] is a one-piece moulding, the assembly is embedded within the cover, and the aperture [revealing] reveals said display.